

REMARKS

This paper is responsive to the Final Office Action dated March 15, 2006 (the “Final Office Action”).

Claims 1-146 were previously pending, with claims 47-112 withdrawn.

Claims 1, 47, 81, and 113 have been amended in this paper.

Claims 147-150 have been added. No claims have been canceled.

Thus, claims 1-150 are now pending, with claims 47-112 withdrawn and claims 1-46 and 113-150 under consideration.

Claims 54, 58, 62, 73, 86, 90, 94, and 105 were previously under objection. Claims 1-47, 54, 58, 62, 73, 81, 86, 90, 94, 105, and 113-146 were previously under rejection. Claims 1-6, 10-47, 54, 58, 62, 73, 81, 86, 90, 94, 105, and 113-146 stood rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,282,170 issued to Bentall et al. (“*Bentall*”) in view of U.S. Patent No. 5,737,319 issued to Croslin et al. (“*Croslin*”). Claims 7-9 stood rejected under § 103(a) as being unpatentable over *Bentall* in view of *Croslin* and further in view of U.S. Patent No. 6,324,162 issued to Chaudhuri (“*Chaudhuri*”).

Claims 1, 47, 81, and 113 have been amended and claims 147-150 have been added. The amendments add no new matter and are fully supported by the original specification, for example on pp. 13-18 and 21-22 (among others).

Formal Matters

The Office Action Summary states that “Claims 1-47, 54, 58, 62, 73, 81, 86, 90, 94, 105, and 113-146 is/are pending in the application.” Applicant respectfully notes that this summary is in error. As clearly shown in Applicant’s previous Response (dated December 27, 2005), claims 1-146 were previously pending. The status of claims 1-146 as pending may be readily seen in the claim listing on pp. 2-32 of Applicant’s previous Response, and in the initial remarks on p. 33 of Applicant’s previous Response.

Of these 146 claims, claims 47-112 had been previously withdrawn. Applicant respectfully notes that although these claims have been withdrawn from consideration, they have not been canceled. Applicant notes that the status of “withdrawn” is distinct from the status of “canceled,” as noted, for example, in MPEP § 809.02(c) and 37 C.F.R. § 1.121(c). In particular, 37 C.F.R. § 1.121(c)(2) specifically notes that “[i]f a withdrawn claim is currently amended, its status in the claim listing may be identified as “withdrawn—currently amended.” A similar annotation was used in appropriate situations for various claims in Applicant’s previous Response.

In summary, **while claims 47-112 have been withdrawn, they have not been canceled.** Thus, they remain pending in the application at this time, although they are currently withdrawn from consideration. In the above amendments, claims 147-150 have been added. Accordingly, claims 1-150 are now pending, with claims 47-112 withdrawn and claims 1-46 and 113-150 under consideration.

Claim Objections

Claims 54, 58, 62, 73, 86, 90, 94, and 105 are under objection as having informalities therein. The Office Action states that claims 54, 58, 62, 73, 86, 90, 94, and 105 depend on canceled claims, and that claims 54, 62, and 73 have duplicate limitations.

Applicant respectfully disagrees. As discussed above, claims 47-112 are withdrawn from consideration but remain pending in the application. These claims have not been canceled. **The status of “withdrawn” is distinct from the status of “canceled,”** as noted, for example, in MPEP § 809.02(c) and 37 C.F.R. § 1.121(c). The status of claims 47-112 as withdrawn (but not canceled) may be readily seen in the claim listing on pp. 10-25 of Applicant’s previous Response, and in the initial remarks on p. 33 of Applicant’s previous Response.

Claim 54 depends directly on claim 53, and indirectly on claims 52, 50, and 47, which are currently pending, although withdrawn from consideration. Accordingly, claim 54 does not depend on a canceled claim. Similarly, claims 58, 62, 73, 86, 90, 94, and 105 also do not depend on canceled claims.

Further, claims 54, 62, and 73 do not have duplicate limitations. Claim 54 depends on claim 53 and thus includes a limitation “wherein said computer code is configured to cause said processor to perform said restoring of said virtual path **at said first node.**” Claim 62 depends on claim 61 and thus includes a limitation “wherein said computer code configured to cause said processor to perform said restoring of said virtual path **at one of said intermediate nodes.**” Claim 73 depends on claim 72 and thus includes a limitation “wherein said computer code configured to cause said processor to perform said restoring of said virtual path **at said second node.**”

Since claims 54, 58, 62, 73, 86, 90, 94, and 105 do not depend on canceled claims, and since claims 54, 62, and 73 do not have duplicate limitations, Applicant respectfully requests that the objections to the claims be withdrawn.

Rejection of Claims under § 103(a)

Claims 1-6, 10-47, 54, 58, 62, 73, 81, 86, 90, 94, 105, and 113-146 stood rejected under § 103(a) as being unpatentable over *Bentall* in view of *Croslin*. Claims 7-9 stood rejected under § 103(a) as being unpatentable over *Bentall* in view of *Croslin* and further in view of *Chaudhuri*. Applicant notes that claims 54, 58, 62, 73, 81, 86, 90, 94, and 105 have been withdrawn from consideration. Nonetheless, Applicant is grateful for the Examiner's review of these claims.

Applicant respectfully submits that the claims are allowable under § 103(a) because the cited references, taken either individually or in combination, fail to disclose each limitation of the pending claims. For example, independent claim 1 as amended is directed to a method for restoring a virtual path in an optical network and includes limitations of:

broadcasting a plurality of resource request packets to a plurality of nodes in said optical network;

and

dynamically identifying a plurality of nodes with resources **as a result of said broadcasting**.

(emphasis added).

The act of dynamically identifying a plurality of nodes is performed in conjunction with the act of broadcasting in claim 1. To further clarify this relationship, Applicant has amended

claim 1 to indicate that the act of dynamically identifying a plurality of nodes is performed as a result of the broadcasting.

The cited art does not disclose the limitation of dynamically identifying a plurality of nodes with resources as a result of the broadcasting. The Final Office Action cites the following portions of *Bentall* as disclosing “broadcasting.”

Send messages along alternative routes to determine spare capacity of each link of alternative routes through a network.

Bentall at FIG. 3 step 100.

FIG. 3 illustrates an embodiment of the invention in schematic form. Messages are sent along alternative routes to determine spare capacity of each link of alternative routes around a broken part of the network at step 100. Thus alternative routes are ascertained on a local basis to avoid the need for preplanning or a centralised control of the search or calculation of alternative routes.

Bentall at col. 5 lines 47-54.

These portions of *Bentall* describe the sending of messages along alternative routes to determine spare capacity. The Final Office Action cites a portion of the following passage from *Bentall* as disclosing “dynamically identifying a plurality of nodes.”

According to a first aspect of the invention there is provided a method of restoring a route set up in a network following a failure of part of the network, the network comprising a plurality of fixed nodes, and links interconnecting the nodes, wherein the restored route is allocated, the method comprising the steps of:

- selecting a restoration route around the failed part;
- allocating to the restoration route at least a portion of the capacity of the links it uses;

determining if the restoration route already set up can be optimised so as not to use at least one of the links currently used by the restoration route;
 changing the restoration route according to the result of the determination; and
 making available the capacity allocated to the restoration route on the link or links no longer used, for use in setting up other routes.

Improved capacity allocation can be achieved if restored routes already set up are examined to see if they can be optimised.

Advantageously the method also comprises the step of interrogating nodes on the route to gather information on possible alternative routes. Gathering information on possible alternative routes means there is no need to have preplanned preferred routes or centralised knowledge of the configuration of the network, and thus the optimisation can be adaptive and easily take account of changes in network configuration.

Bentall at col. 2 line 55—col. 3 line 15.

Even if the Final Office Action is correct in asserting that the above passages teach “broadcasting a plurality of resource request packets to a plurality of nodes in said optical network” and “dynamically identifying a plurality of nodes with resources” (and Applicant does not concede this point), **the cited art nonetheless does not provide any indication that the act of dynamically identifying a plurality of nodes is performed in conjunction with the act of broadcasting.**

The above cited passages from *Bentall* describe the “gathering of information” on possible alternative routes. The gathering of information involves interrogating nodes. This gathering of information in *Bentall* is used to avoid the need for preplanned alternative routes. It is also used to avoid the need for centralized knowledge of the configuration of the *Bentall* network. The “gathering of information” is discussed in column 3 of *Bentall*, and is put forth in the Final Office Action as being an example of dynamically identifying a plurality of nodes.

However, the “gathering of information” in *Bentall* is not connected with the “messages . . . sent along alternative routes” in column 5 of *Bentall*. These messages are put forth in the Office Action as an example of broadcasting. But *Bentall* does not describe, teach, or suggest that the messages sent along alternative routes (from col. 5) lead to or result in the gathering of information (from col. 3).

The messages and the gathering of information are presented in different sections of *Bentall*, and are not described as being related to each other. In particular, *Bentall* does not describe a causal link between the messages and the gathering of information. Even more specifically, *Bentall* does not describe the gathering of information as being performed “as a result of” the messages.

Thus, even if the portions of *Bentall* indicated in the Final Office Action do describe a “broadcasting” and a “dynamically identifying a plurality of nodes with resources,” the cited art does not describe “dynamically identifying a plurality of nodes with resources **as a result of said broadcasting.**”

Further, this limitation is also not disclosed in *Croslin*. *Croslin* describes a dynamic network restoral application that directs a switching element to select an alternate transmission segment to replace a severed one. *Croslin* at col. 1, lines 50-67. Applicant sees no description in *Croslin* of an identification of nodes with resources as a result of a broadcasting of a plurality of resource request packets. Additionally, Applicant does not find this limitation in *Chaudhuri*.

The cited art therefore does not describe the limitation from Applicant's claim 1 of "dynamically identifying a plurality of nodes with resources as a result of said broadcasting." At least for this reason, Applicant's amended claim 1 and all claims dependent therefrom are allowable under § 103(a). For at least similar reasons, Applicant's independent claim 113 and all claims dependent therefrom are also allowable under § 103(a).

Still further, the cited *Croslin* procedure is also at odds with the teachings of *Bentall*, since *Croslin* notes that "[d]ynamic network restoral processes require a timely and accurate portrayal of the network topology" at the time of network outages. *Id.* The *Croslin* teachings are focused on a dynamic determination of physical topologies of a network, with such determinations then being available in support of this requirement.

In contrast, as cited above, *Bentall* particularly teaches the gathering of information to avoid such reliance on detailed portrayals of network topology. "Gathering information on possible alternative routes means there is no need to have preplanned preferred routes or centralised knowledge of the configuration of the network, and thus the optimisation can be adaptive and easily take account of changes in network configuration." *Bentall* at col. 2 line 55—col. 3 line 15. Thus, the teachings of *Bentall* and *Croslin* are directed at cross purposes. Where *Bentall* describes techniques for avoiding a need for knowledge of a network topology, *Croslin* teaches techniques for determining network topology in support of different types of processes that specifically require such knowledge. A person having ordinary skill in the art would therefore not use these references in furtherance of each other's teachings, and would not have a motivation to combine these references—even with the Final Office Action's proposed goal of "avoid[ing] the dependen[ce] of the limit preplanned routes and reduc[ing] the time delay." For this reason as well, the pending claims are allowable under § 103(a).

CONCLUSION


Applicant submit that all claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia, 22313-1450, on June 15, 2006.


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Date of Signature

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